

MAR 26 2007

Applicant intends this response to be a complete response to the Examiner's **27 December 2007 Non-Final Office Action**. Applicant has labeled the paragraphs in his response to correspond to the paragraph labeling in the Office Action for the convenience of the Examiner.

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-35, drawn to a method for using a sulfur scavenging composition, classified in class 208, subclass 236.
  - II. Claims 36-59, drawn to a sulfur scavenging composition and method for making a sulfur scavenging composition, classified in class 507, subclass 239.
2. The inventions are independent or distinct, each from the other because: Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case, the composition of (or prepared by) the Group II invention could be used for treating fluids other than in a well or well bore environment and/or possesses utility in applications other than the removal of noxious sulfur species, e.g. as a corrosion inhibitor or additive in a cleaning formulation.
3. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Robert W. Strozier, attorney for Applicant, on December 13, 2006 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-35. Affirmation of this election must be made by applicant in replying to this Office action. Claims 36-59 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

**Applicant acknowledges the restriction requirement.**

5. Applicant is advised that should claim 1 be found allowable, claim 18 will be objected to

under 37 CFR 1.75 as being a substantial duplicate thereof.

The Examiner contends as follows:

When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Applicant has amended claim 18 so that it is not co-extensive with claim 1. Applicant, therefore, respectfully requests withdrawal of this rejection.

***Claim Rejections - 35 USC § 102***

7. **Claims 1-35** stand rejected under 35 U.S.C. 102(b) as being anticipated by Weers (EP 475641 A1).

The Examiner contends as follows:

8. With respect to claims 1 and 18, Weers discloses contacting a hydrocarbon containing hydrogen sulfide with an effective amount of a sulfur scavenging composition comprising substantially monomeric aldehyde-amine adducts (see Weers, page 2, lines 48-50).

9. With respect to claims 2-6, 19, and 23-26, Weers discloses the use of aldehyde and amine species to produce a sulfur scavenging composition (see Weers, pages 3-5).

10. With respect to claims 7 and 27 and Weers discloses a sulfur scavenging composition comprising a solution including from about 5 wt.% to about 50 wt.% of the adducts, the remainder being a solvent (see Weers, page 5, lines 57-58).

11. With respect to claims 8-17 and 20-22, Weers discloses contacting a sulfur scavenging composition with a hydrocarbon containing hydrogen sulfide (see Weers, page 5, lines 53-54).

12. With respect to claims 28 and 29, Weers provides an inherent disclosure for contacting a sulfur scavenging composition *in a container*. Weers does not explicitly disclose use of a "container." Nevertheless, the person having ordinary skill in the art would recognize from Weers' disclosure that use of some sort of container is necessary to hold the sulfur-containing hydrocarbon to be treated by the sulfur scavenging composition. Likewise, the person having ordinary skill in the art would recognize that the sulfur scavenging composition could be added (or "contacted") with the hydrocarbon either prior to, after, or at the same time as adding the hydrocarbon to the "container."

13. With respect to claim 30, Weers discloses a sulfur scavenging composition comprising a solution including from about 5 wt.% to about 50 wt.% of the adducts, the remainder being a solvent (see Weers, page 5, lines 57-58).

14. With respect to claim 31, Weers discloses contacting a sulfur scavenging composition with a hydrocarbon containing hydrogen sulfide (see Weers, page 5,

lines 53-54).

15. With respect to claims 32-34, Weers provides an inherent disclosure for introduction of a sulfur scavenging composition via a chemical tool, coiled tubing, or capillary coiled tubing (CCT). Weers does not provide an explicit disclosure for the means by which the sulfur scavenging composition is added to the sulfur-containing hydrocarbon to be treated. Nevertheless, the person having ordinary skill in the art would recognize that any suitable means could be used, be it by pouring (i.e. "batch introducing step"), by pumping the composition through a pipe, or other "chemical tool," "coiled tubing," or "capillary coiled tubing (CCT)."

16. With respect to claim 35, Weers discloses a sulfur scavenging composition comprising a solution including from about 5 wt.% to about 50 wt.% of the adducts, the remainder being a solvent (see Weers, page 5, lines 57-58).

Applicant disagrees with the Examiner's interpretation of Weers. Weers discloses reaction products of amines and polyamines, where the amino groups are primary. The adducts are all of the basic imine structure ( $N=C$ ). The present invention does not form imines; the reaction products cannot because the amines used are all secondary and include at least one sterically bulky group. Weers does not disclose the formation of monomeric aldehyde-amine adducts formed from a reaction of an excess of the aldehyde relative to the amine. Moreover, the resulting adducts do not include imine structure ( $N=C$ ), but only saturated structures.

Because Weers does not disclose the reaction adducts of this invention, Weers cannot anticipate claims 1 and 18 or any other their dependents.

### *Double Patenting*

The Examiner states as follows:

18. Claims 1-35 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 6, 8, 12-15, and 18-21 of Gatlin (US 7140433). Although the conflicting claims are not identical, they are not patentably distinct from each other because both claim the same methods of use for the same sulfur scavenging composition.

The invention of the '433 patent is claimed in terms of the chemical structural formula of a compound contained in the sulfur scavenging composition (see Gatlin, claim 1). The invention of the present application is claimed in terms of a composition comprising "substantially monomeric aldehyde-amine adducts" of a given set of chemical structural formulas. In view of the teachings disclosed in the '433 patent describing suitable amine and aldehyde species for producing the sulfur scavenging composition, the claims of the present application are not patentably distinct.

Applicant disagrees with the Examiner's position relative to US 7140433. US 7140433

disclosed reaction products made from a primary amine and an aldehyde to form bimolecular (monomeric) amine-aldehyde adducts, which are then reacted with amine heads (diamines) to form diamine terminated sulfur scavengers. The present invention does not use primary amine. In US 7140433, the monomeric products of the primary amine and the aldehyde produce imines that then react with the amine heads to form the final product - diamine terminated compositions. The compositions of US 7140433 could not be produced with the products of this invention as the products cannot form imines and therefore would not react with diamines to form diamine terminated products.

US 7140433 does not disclose, teach or even suggest the compositions of this invention, and, therefore, cannot render the present claims obvious. Moreover, the compositions of this invention would not work as intermediates in the preparation of the US 7140433 diamine terminated products - no imines need to react with the amine heads, diamines.

Applicant, therefore, respectfully requests withdrawal of this double patenting rejection.

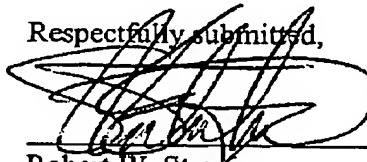
Having fully responded to the Examiner's Non-Final Office Action, Applicant respectfully urges that this application be passed onto allowance.

**The Commissioner is authorized to credit or debit deposit account no. 501518 as needed in filing this response.**

If it would be of assistance in resolving any issues in this application, the Examiner is kindly invited to contact applicant's attorney Robert W. Strozier at 713.977.7000

Date: **March 26, 2007**

Respectfully submitted,

  
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